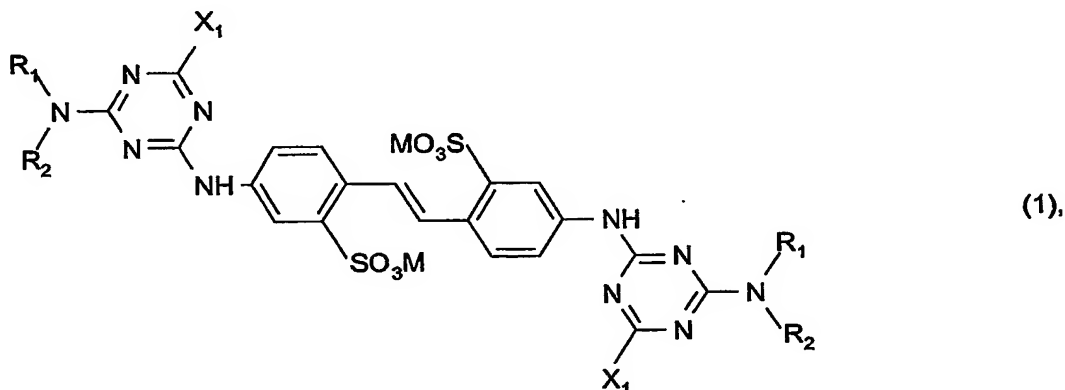


Claims

1. A whitening pigment comprising the reaction product of

(a) a melamine-formaldehyde and/or a melamine-urea polycondensation product and

5 (b) a water-soluble fluorescent whitening agent of the formula



wherein each of the two

10 R_1 groups, independent of the other, represents a C_1 - C_6 alkyl or C_1 - C_4 alkyl- O - C_1 - C_4 alkyl residue, which is substituted by one or two $-CONH_2$, $-CONHC_1$ - C_4 alkyl, $-COOH$, $-SO_2NH_2$, $-SO_2NHC_1$ - C_4 alkyl or $-NH_2$ groups, each of the two

R_2 groups, independent of the other, represents hydrogen, C_1 - C_4 alkyl, C_2 - C_4 hydroxyalkyl or C_1 - C_4 alkoxy C_1 - C_4 alkyl, or

R_1 and R_2 together with the nitrogen atom complete a piperazine ring, each of the two

15 X_1 groups, independently, represent $-OH$, $-OC_1$ - C_4 alkyl, $-O$ aryl or the group $-NR_3R_4$, wherein R_3 and R_4 each, independently, represent hydrogen, C_1 - C_4 alkyl, C_2 - C_4 hydroxyalkyl, C_1 - C_4 alkoxy C_1 - C_4 alkyl, a phenyl, phenyl mono- or disulphonic acid residue or,

R_3 and R_4 , together with the nitrogen atom to which they are attached, complete a morpholino, piperidino or pyrrolidino ring or, alternatively,

20 X_1 represents an amino acid residue from which a hydrogen atom has been abstracted from the amino group and

M is hydrogen, an alkaline or alkaline earth metal ion, ammonium, mono- di-, tri- or tetra-substituted C_1 - C_4 alkylammonium or C_2 - C_4 hydroxyalkylammonium or mixtures thereof.

25 2. A whitening pigment according to claim 1, wherein the component

(a) is a melamine-formaldehyde polycondensation product.

3. A whitening pigment according to claims 1 or 2, wherein, in the compound of formula (1), each of the two R₁ groups, each of the two R₂ groups and each of the two X₁ groups are the same.
- 5 4. A whitening pigment according to any one of claims 1 to 3, wherein, in the compound of formula (1),
R₁ represents a C₁-C₄alkyl residue, which is substituted by one -CONH₂ or -CONHC₁-C₄alkyl group.
- 10 5. A whitening pigment according to any one of claims 1 to 4, wherein, in the compound of formula (1),
R₂ represents hydrogen, C₁-C₄alkyl or C₂-C₄hydroxyalkyl.
- 15 6. A whitening pigment according to any one of claims 1 to 5, wherein, in the compound of formula (1),
X₁ represents the group -NR₃R₄, wherein
R₃ represents hydrogen, C₁-C₄alkyl, C₂-C₄hydroxyalkyl, C₁-C₄alkoxyC₁-C₄alkyl, a phenyl, phenyl mono- or disulphonic acid residue,
R₄ represents hydrogen C₁-C₄alkyl or C₂-C₄hydroxyalkyl or,
20 R₃ and R₄, together with the nitrogen atom to which they are attached, complete a morpholino ring or, alternatively,
X₁ represents an amino acid residue from which a nitrogen atom has been abstracted from the amino group.
- 25 7. A whitening pigment according to any one of the preceding claims, wherein, in the compound of formula (1),
M represents hydrogen, sodium or potassium.
- 30 8. A process for the preparation of whitening pigment according to claim 1, whereby the melamine-formaldehyde or melamine-urea polycondensation product is reacted with a fluorescent whitening agent of formula (1) in aqueous medium, in the presence of mineral acid, and subsequently treated with base.

- 16 -

9. Use of the whitening pigment composition, according to any one of claims 1 to 7, for the fluorescent whitening of paper.

- 5 10. A paper coating composition comprising, in addition to 0.01 to 10 parts by weight of the whitening pigment according to claim 1, per 100 parts of inorganic pigment,
- (i) from 3 to 25 parts by weight of binder and co-binder,
 - (ii) 0 to 1 part by weight of rheology modifier and
 - (iii) 0 to 2 parts by weight of wet-strength agent.

- 10 11. Use of the coating composition according to claim 10, for the fluorescent whitening of paper.

12. Paper which has been treated with whitening pigment composition according to claim 9 or a coating composition, according to claim 10.

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